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For applying Plaster-Stucco-Waterproofing

Imbeds Metal Lath
and Reinforcing
Completely Preventing
Corrosion

Any Thickness can be
Obtained



Projects the Material
Against
Brick, Hollow Tile,
Concrete, Stone,
Concrete Blocks, Wood
and Metal Lath



HODGES ELECTRIC STUCCO MACHINE CENTRIFUGAL ACTION

Also Projects Concrete Aggregate up to One-Half inch Size

A portable machine weighing 30 pounds, shipping weight 40 pounds, packed in fibre cartons, sent by Express or Parcel Post.

Hung over the shoulders of the operator the same as a drum. Attachable to an electric light socket either alternating or direct current. All kinds of stucco effects are obtained with the machine.



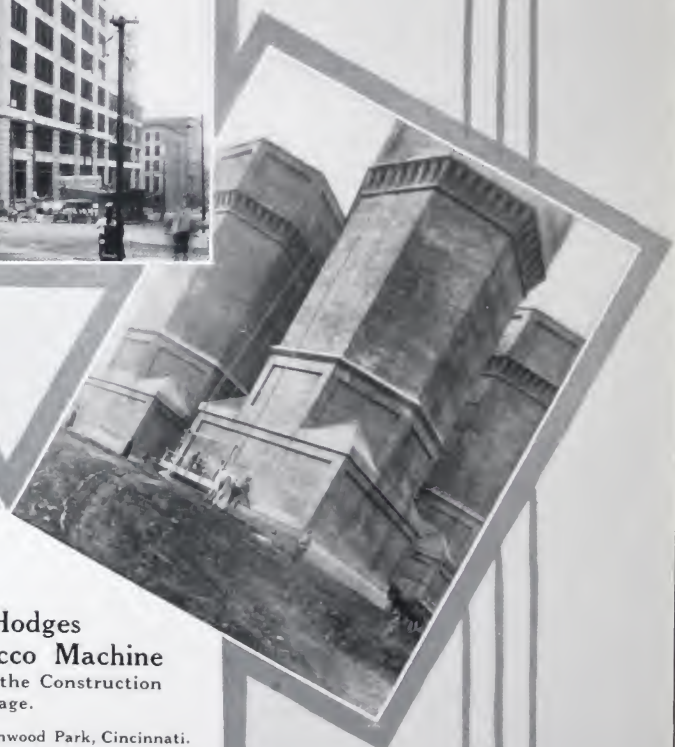
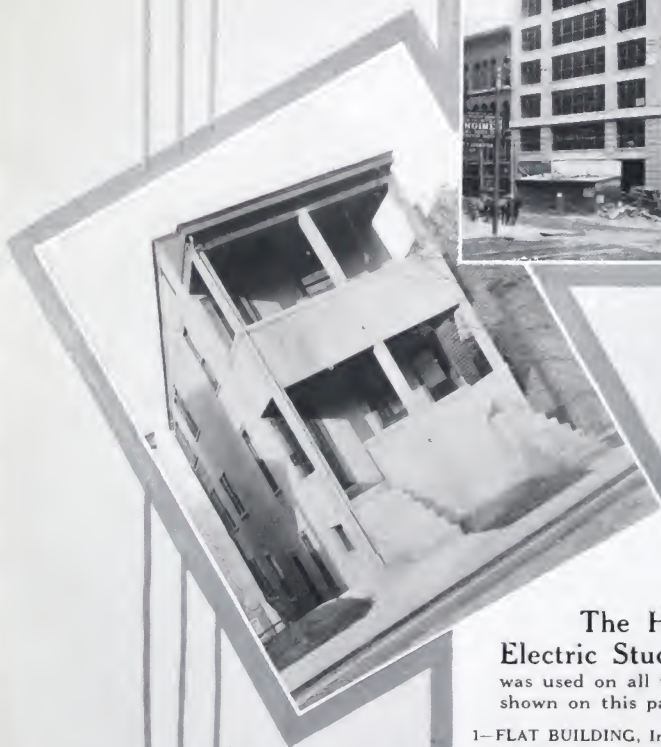
One operator with helper to supply material equals the hand work of several men. Can be used to apply any of the stucco processes.

A machine to benefit the work of every Contractor of Building Construction, Bridges, Concrete Ship and Barge Building, Railroads, Tunnels, Mining, Fortifications, etc., etc.

HODGES STUCCO MACHINE WORKS

Office: 25th Floor, Union Central Tower

CINCINNATI, OHIO, U. S. A.



The Hodges Electric Stucco Machine

was used on all the Construction
shown on this page.

- 1- FLAT BUILDING, Inwood Park, Cincinnati.
- 2- Addition to PETERS CARTRIDGE FACTORY, Linwood, Cincinnati. Cement Stucco on Metal Lath.
- 3- WALSH BUILDING, Cincinnati. The area walls were left standing when old buildings were torn down. Concrete was projected against the walls to a depth of 3" to bring them to a true line.
- 4- FLAT BUILDING, Vine Street Hill, Cincinnati. Stucco applied to Concrete Walls.
- 5- WATER TOWERS, Kennedy Heights, Cincinnati. Portland Cement Stucco against Concrete.

HODGES ELECTRIC STUCCO MACHINE

A Story of Fact—Not Fiction

No greater proof is required that "necessity is the mother of invention" than the experience of Mr. J. E. Hodges—Superintendent for building construction of The Ferro-Concrete Construction Company, one of the largest building contracting companies of Cincinnati and the Middle West; a company known throughout the land, filling contracts from Coast to Coast—Gulf to the Great Lakes and Canada.

This large concern specializes in Concrete Construction and require a tremendous amount of plastering, stucco and truing of concrete surfaces.

With the shortage and high cost of labor—the demand for shorter hours, etc., Mr. Hodges often labored under serious difficulties and handicaps in finishing buildings at a reasonable cost and specified time.

Mr. Hodges being of an inventive, ingenious, mechanical mind of many years practical experience (the Construction Company making use of several of his inventions among their equipment) began his experiments several years ago on a Plastering and Stucco device.

He planned and built numerous machines with which he carried on experiments on actual jobs, each machine being an improvement upon the other, taking note of every defect brought out through use and making the changes through which he evolved the present perfected mechanism.

How successfully he has accomplished this may be noted by the cut shown on this page and front page.

The Hodges Electric Stucco Machine was quickly recognized of such undoubted merit by the Patent Office, that U. S. Patent No. 1,264,647 was issued April 30, 1918.

Observe by the cut the ingenious manner in which he devised not only a portable mechanism but an actual carrying machine—hung over the shoulders as is a drum, weighing but thirty pounds.

(Our soldiers in France carried an equipment weighing seventy-two pounds.)

He never lost sight of the fact to prevent making it a burden to the operator—in other words, a workman himself, he desired to carry out the thought and verify the words of Thomas A. Edison, who said *"It is my belief that the world's most immediate scientific need is inventions which will lighten the grinding toil of labor."*

Thus this invention is a clean cut benefaction to mankind—it benefits the worker—the contractor—the builder.

One operator with a helper to keep the hopper supplied, will apply as much stucco as several men; in other words, a man and his helper can easily apply an average of 350 square feet per hour.

Further, this remarkable instrument will also project against metal lath and completely imbed same in a $\frac{5}{8}$ " deep coat.

The light weight of machine is secured through specially treated aluminum castings; the spider arms and automatic feed are of tool steel, the working parts or inside mechanism are all made to withstand rapidity of action with Swedish ball bearings; bronze bushings and best workmanship.

The principal weight is represented by a Universal Electric Motor, which is of special design and manufacture, operating on every job, whether alternating or direct electric current.

The motor is of great power, speed, durability, service, quality and of small compass.

An aluminum housing protects the electric motor and gears.

Grease cups supply all necessary lubrication.

It fills a long-felt want and strange as it may seem, few of Mr. Hodges' many inventions have been exploited to the public—he invented to benefit his own and his firm's work, thus his Electric Stucco Machine would have suffered a like fate, but he was finally convinced of his opportunity to benefit the entire building industry and to reap a reward from its manufacture and sale.

Its undoubted destiny is its use throughout the world.

Business Opportunities Calling You.

We have a message for every man interested in cement and stucco work.

The man who is a contractor plasterer—the man who is contemplating starting a business—the Stucco expert.

As a day laborer, we can lighten your task and you will prove of greater value to your employer, the machine doing fully triple the work and does it better and you are not worn of body and exhausted after the day's work and can go to your home feeling and knowing you can be a comfort to your family, having used a machine to do the work which formerly required your hands and arms in reaching, stretching and applying and you will earn more wages.

The plasterer contractor can use these machines and greatly enlarge his sphere of work—see his way clear to figure on larger contracts and can easily out-bid competitive hand work.

The man who is looking for a paying business, even though without former experience, can fully post himself by careful attention to, and following our clear cut instructions for operating the machine and the mixing and applying of the various plaster and stucco requirements and secure undoubted financial results and consequent success.

The opportunity for developing such a business lies in every community; take for instance the various cities, towns, farms, etc., you will find frame residences, stores, barns, silos as well as old brick and dilapidated stone buildings in localities, which, through long use, age, neglect, exposure, lack of paint or care, are in a state of necessary repair or decay—add to this the menace of

fire from without and you cannot help but note how greatly the business chances stack up in splendid proportions, all offering an unusual grasp at lucrative business.

Why should an owner of such property waste money on repairs, paint or recurrent expense of maintenance when you can prove to him through common sense argument plus the literature and evidence which we furnish you that you can eliminate all this and make his property again permanent, everlasting, add greatly to its value and make what seemed like a loss and absolutely unsaleable, into a paying, good investment—it is being done in every section of our great country—it saves insurance, paint, maintenance cost—fuel for the occupant in winter—it means a cooler abode in summer.

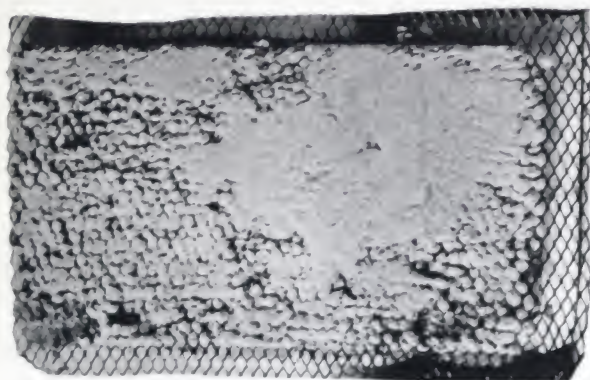
To change frame construction by the application of plaster or stucco is being urged with the greatest possible emphasis by the Fire Underwriters Association—Society for Fire Prevention—Portland Cement Association—American Concrete Institute and U. S. Bureau of Standards—proof positive of an unusual business chance—in every nook and corner, with every section of this great country of ours as an operating field.



Big Work with a Little Machine



Back of Machine Applied Stucco.



Back of Trowel or Hand Applied Stucco.

Back views of hand applied stucco and machine applied stucco, both against the same base—note the impossibility of completely imbedding the metal lath by hand application and the complete imbedding by use of the machine. End view, shows complete imbedding of the metal lath in a stucco projected depth of $\frac{5}{8}$ ".



Aggregate Feeding Hopper



Aggregate Spout

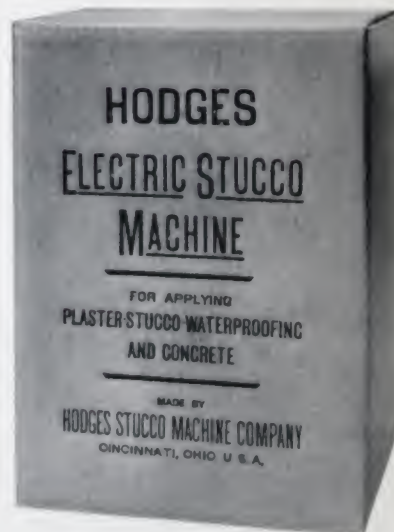
When projecting aggregates the aggregate feeding hopper is placed over top of machine hopper and such aggregates as pebbles, granites, marble, spar, etc., feed proportionately into machine and are projected by the blades through the aggregate spout within a concentrated area, so as not to waste the aggregates in securing pebble dash and other aggregate dash effects.



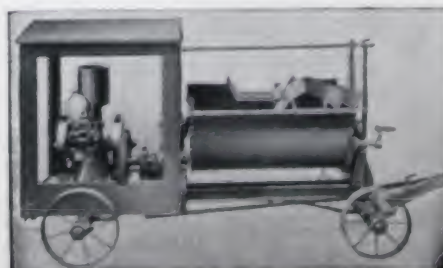
Sewer Manhole 40 feet deep, constructed of Vitrified Brick. The City Engineer specified a rough coat of cement 2" thick as a waterproofing. Hodges Electric Stucco Machine used.



Waist belt and shoulder strap to which the steel spring holding machine is attached by engaging the swivel snap bolt. The shoulder strap may be changed from one shoulder to the other instantly.



Fibre Carton in which machine and accessories are shipped by express or parcel-post. Total shipping weight when packed 40 lbs. Carton measures 13" each way around body and has a depth of 18." Cubic displacement $1\frac{3}{4}$ cubic feet. Cartons boxed for export.



"Blystone" 3 cubic feet Power Mortar Mixer.

After a careful and exhaustive investigation of stucco and plaster mixing machines, we highly recommend the celebrated "Blystone" Mixers and for which we are selling agents. We furnish circular and prices on application.

PORTLAND CEMENT STUCCO

ONE of the popular and rapidly growing uses of cement is represented by cement stucco, which is used not only to give a pleasing weather and fire-resisting finish to new frame buildings but to renovate old brick, frame and stone structures, regardless of type or details of construction, by "overcoating."

As is true of other practices or processes, there are right and wrong ways of making and applying stucco, or at least there is some one way which, if followed, is certain to give most satisfactory results.

*From—"Recommended Practice for Portland Cement Stucco."
Published by Portland Cement Association.*

The Enamel Surface Effect on Stucco When Placed with the Hodges Stucco Machine

Do you remember when you were a "kid" and got your hands on some "putty" how you and the other boys made putty balls and then threw them with all your force against the wall and the one who flattened his the most was the best thrower.

That was the only result you were interested in, but the flattening out of the putty by the impact against the wall drove to the surface a film or ooze of oil, so that if you had lightly wiped your finger over the surface, you would have noticed your finger shine with oil.

That is precisely the result obtained when stucco is projected against any base by a Hodges Electric Stucco Machine, excepting that instead of oil, the force with which the spider blades throw the material brings to the surface an ooze of moisture—a film of water causing a skin or enamel to form, leaving a surface impervious to moisture.

This has now become a recognized scientific fact, an undoubted assurance of effect, impossible to secure by hand application and of such merit that stucco already in great demand for outer construction finishes has a future trend that may be designated by leaps and bounds.

The following will be found a conservative average estimate of stucco projected by the machine.

Against a poured concrete base a coat of stucco from $\frac{1}{4}$ " to $\frac{3}{8}$ " an operator should project 350 to 400 square feet **per hour**; against unpainted brick, hollow tile, concrete blocks, and like materials or construction from 300 to 350 square feet **per hour**; against Bishopric Board and like wood lath backing, in filling up the keys and projecting as above, 300 to 350 square feet **per hour**; against Gypsum Plaster Board and other like materials from 400 to 450 square feet **per hour**.

Against Metal Lath furred out $\frac{1}{4}$ " with a backing of building or tar paper applied to a sheeted surface or studding 350 to 450 square feet **per hour**.

Profits on Stucco Contracts must naturally vary on account of differences in various localities as to cost of materials and labor—the various stucco effects or finishes desired—the base against which the stucco is to be applied, are all factors to be taken into consideration.

We have given information as to number of men required and a conservative estimate of square feet covered per hour by a machine operator on simply $\frac{1}{4}$ " to $\frac{3}{8}$ " projected coats; reducing the square feet to square yards by dividing by 9 and figuring an approximate profit of but 10 cents net per square yard, you can easily note that the machine will earn a handsome profit to the owner.

The machine is made of the best materials and workmanship; all castings are aluminum; spider blades of hardened tool steel; gears are machine cut; bushings are of bronze and shafts run in ball bearings of Swedish make.

When a flat, smooth or plain coat or finish is desired either the base coat or second applied coat must be floated in the same manner as when hand applied, using the same kind of floating tools.

Labor costs should be figured on the basis of one man to do the mixing—one as the helper to supply the material to the operator and one man to operate the machine, a total of three men.

A reliable cement stucco may be produced from one part Portland Cement, three parts clean washed sand, sifted through a No. 6 screen and a 10% content of hydrated lime.

The power operating cost for electric current will approximate an average of two cents per hour.

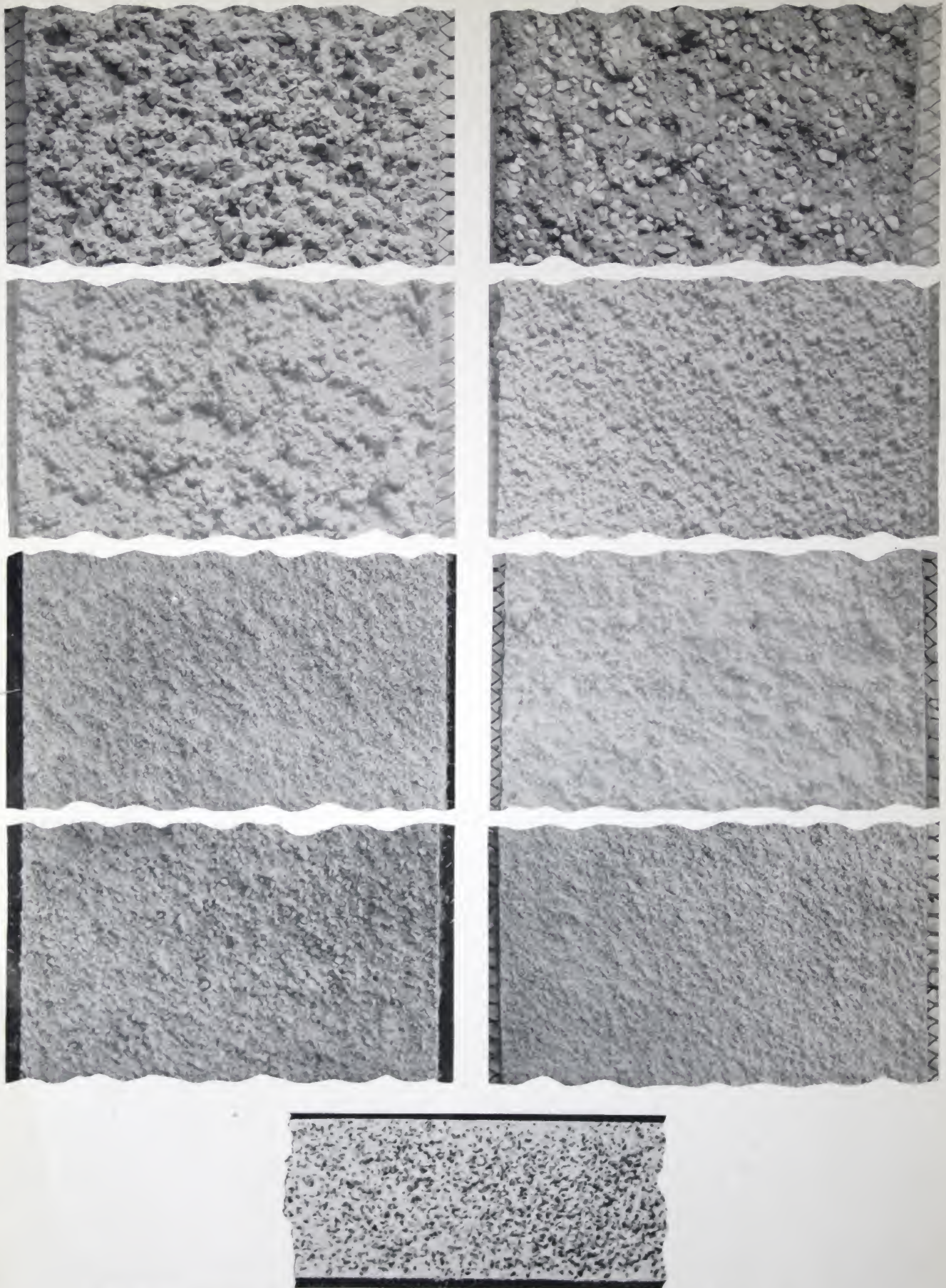
The spider blades revolve at the rate of 1500 revolutions per minute.

In stuccoing old frame houses, the lapsiding is not removed and the paper is placed over the lapsiding and the metal lath nailed on and stucco applied; the zig zag of the lapsiding furnishes a sufficient key so that in such cases furring out is not necessary.

The mixing of stucco should be done by machinery where possible—but whether by hand or machine, all materials should first be mixed dry and then again mixed with the water added.

All metal lath used as above will be completely imbedded in a coat $\frac{5}{8}$ " thick. In nailing metal lath six penny nails should be used and driven in $\frac{2}{3}$ of their length and then bent and hammered over.

The machine hangs on an extension spring (see cut on third page) this permits an easy up and down movement, the benefit of which will be recognized by the operator, who by a slight pressure downward or slight lift upward of the handles, avoids strain upon the arms.



A few illustrations of artistic effects made with the machine. The variety of designs possible are innumerable and cannot be produced by hand.

The Simple Instructions for Operating "HODGES ELECTRIC STUCCO MACHINE"

No. 1.—Place belt around the waist, pull the strap over shoulder, attach spring to machine and to the strap, connect extension cord to socket and start the machine by pushing switch of motor.

No. 2.—The throat of the machine is adjustable, if a heavy mix is desired, open the throat of the machine, if a light thin mix is desired, close the throat to suit the class of work to be done. For applying, first coat to metal lath, open the throat all the way, for applying dash coat, it is better to have the throat closed up to about $\frac{1}{8}$ " of the feeder.

No. 3.—Never lay the machine down without washing it out; to wash out the machine, pour water into receiving hopper, allow the machine to run and it will thoroughly clean itself. The outside of the machine should be scrubbed off at quitting time each day. Allow no water to enter the air openings of the Motor Housing.

No. 4.—When using the stucco or mortar throwing spider, screen the sand through a No. 6 screen, and not any coarser, if an aggregate coarser than $\frac{1}{4}$ " is used with this spider, it is very apt to bend the blades or otherwise damage the machine.

No. 5.—The gear case is to be filled about every three months. The grease cups should be given about a quarter of a turn twice a day and as soon as they are screwed all the way down, remove the caps and again fill the cups. Use high grade cup grease, such as is used for automobiles. To grease the left hand bearings of the feeder and spider shafts, remove the handle from the feeder shaft, screw out the brass plug in both feeder

and spider shaft bearings, fill with grease, screw it in again and be sure that you screw it all the way up, but not too tight.

No. 6.—In shooting on pebble dash, it is better to use Stone Aggregate Hopper and Projecting Spout as this extra hopper gives a more regular feed and the spout confines the material and prevents it from flying, which causes a loss of the aggregate.

No. 7.—Examine the machine daily to see that all nuts and bolts are tight.

No. 8.—Motors are of the Universal Type and attach to any light socket of 110–120 voltage—if attached to any socket carrying higher voltage, it will instantly burn out the armature—therefore an "ounce of precaution is worth a pound of cure."

We wind motors for 220–250 voltage when so ordered.

No. 9.—To get the maximum amount of work out of the machine, keep plenty of material and feed the machine regularly, have scaffolding built ahead, so that the operator is not delayed, do not have machine operator to do any other work than operate the machine.

No. 10.—Examine the electric attaching plug and see that screws holding wire are tight.

No. 11.—The machine is held about 12" (as an average distance) from the base, wall or object against which to project stucco; this varies however to greater distances, dependent entirely on the work in hand, kind of base, material being used, consistency, finish desired and is subject to the user's requirement.

Copy of Advertisement of a Stucco Contracting Company

STUCCO YOUR HOUSE

Don't paint your house until you consult us about an everlasting coat of Stucco.

Let us eliminate your annual expense of maintenance.

Let us save you money—which stucco will do—saves fuel and insurance.

Let us give your property an artistic finish, make it more attractive, more rentable, more saleable, more interior comfort, more fire-proof.

All stucco applied with the **Hodges Electric Stucco Machine**, assuring superior work.

Allow us to make an estimate.

Samples on display at our office.

CINCINNATI STUCCO PLACING COMPANY

Phone Main 78 - - - ; 2502 Union Central Building

Stucco Put On To Stay Put On

VOLTAGE INFORMATION

In ordering shipment of a machine, it is absolutely necessary that you advise the electric current voltage in your city—this may be learned by asking your city electrician.

All machines are equipped with Universal Motors for use on either alternating or direct current. The most generally used voltage is 110–120 and we therefore equip our machines for that voltage. When so specified we wind for 220–250 voltage. Machines must not be used on higher voltage than machine rating and should the voltage run as high as 500–550 it will be necessary to reduce with a rheostat, reduction coils or other reducing method for the 220–250 wound motors.

We have under Preparation a book entitled "How to Put on Stucco."

When new construction is still without electric current, leads may be run any necessary length from nearest source—in the country where there is sometimes no current a small gasoline engine and small electric generator are necessary to produce power for the machine.

HODGES STUCCO MACHINE WORKS

Office: 25th Floor, Union Central Tower

CINCINNATI, OHIO, U. S. A.

